

REMARKS

The Office Action of April 5, 2011, has been carefully studied. Claims 1, 3, 4, 7-11 and 13 currently appear in this application. These claims define novel and unobvious subject matter under Sections 102 and 103 of 35 U.S.C., and therefore should be allowed. Applicant respectfully requests favorable reconsideration and formal allowance of the claims.

Claim Amendments

Claim 1 has been amended to contain the limitations of claim 6.

Claims 2, 5, 6, 12 and 14-17 have been cancelled as being redundant.

Election/Restriction

The Examiner states that the claims have been examined to the extent that they read on the compounds I' and II'. Accordingly, the claims have been limited to hyaluronic acid-methotrexate (HA-MTX) conjugates to those of formulae I' and II', now comprising claims 1, 3, 4, 7-9 and 13. Claim 10 is directed to an intermediate of the claimed conjugates. Claim 11 is a process for preparing the conjugate of claim 1 using the intermediate of claim 10. Therefore, all of the claims have been limited to the invention relating to compounds I' and II'.

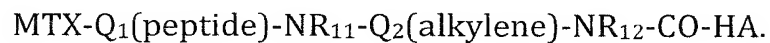
Applicant hereby reserves the right to present the non-elected subject matter.

Double Patenting

Claims 1-17 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 10 of Ikeya et al., US 7,807,675.

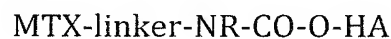
This rejection is respectfully traversed.

The hyaluronic acid-methotrexate (HA-MTX) conjugate claimed herein has the following structure, as defined in claim 1:



In the structure claimed herein, a **carboxyl** group of the hyaluronic acid is coupled with an amino group of the linker Q₁-Q₂ to form an **amide bond**.

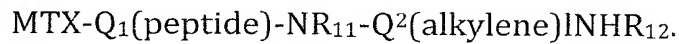
In contrast thereto, the MTX-HA conjugate of Ikeya et al. has the following structure as recited in claim 1:



In the Ikeya structure, a hydroxyl group rather than a carboxyl group of the hyaluronic acid is coupled with the linker to form a **carbamate group**. A typical structure is shown in claim 5, formula 6.

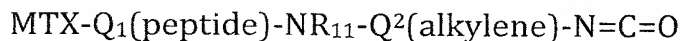
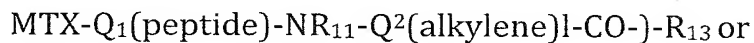
Clearly, the conjugate claimed herein differs from that claimed in Ikeya.

In addition, an intermediate for the HA-MTX conjugate claimed herein has the following structure, as defined in claim 10 of the present application:



In this structure, an **amino** group is located at the end of the linker moiety.

On the other hand, the intermediate for HA-MTX of Ikeya has the following structure, as recited in claim 9:



In the Ikeya structures, a carbamate group or an isocyanate group is located at the end of the linker moiety.

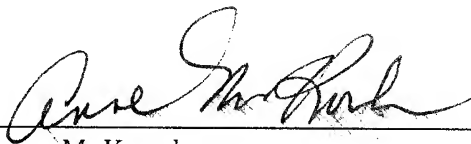
Additionally, the Examiner has not provided any evidence or rationale to indicate why the herein claimed conjugates are obvious over those of Ikeya. The fact that the herein claimed and the Ikeya conjugates are HA-MTX conjugates does not make them obvious, because the groups at the end of the linker are quite different.

Appln. No. 10/591,653
Amdt. dated June 30, 2011
Reply to Office Action of April 5, 2011

In view of the above, it is respectfully submitted that the claims are now in condition for allowance, and favorable action thereon is earnestly solicited.

Respectfully submitted,

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